

# Air Quality and Economic Benefits of Electric Transportation

## Plug-In NC recommendations for Volkswagen environmental mitigation funds:

- Allocate the maximum 15 percent of the funds to increasing electric vehicle charging infrastructure in North Carolina.
- Accelerate the proven benefits of light-duty electric vehicle adoption by immediately expanding EV charging networks into low coverage/high impact areas.
- Prioritize medium and heavy duty vehicle replacements with available electric vehicles.

## Why support electric vehicles?



### Environmental Improvements

- Air quality improvements are the goal of the Volkswagen Settlement funds.
- Investing in charging infrastructure can help move the consumer marketplace to electric vehicles for a big impact on NOx emissions.
- The electric grid gets cleaner every day and emissions benefits will grow over time.



### Economic Development

- Several NC companies work with electric vehicles, including charging station manufacturers and grid integration suppliers. These include ABB, General Electric, Siemens and Brightfield Transportation Solutions.
- By shifting to electric fuel, drivers save money and spend locally.



### Cost Savings

- Electricity is a \$1 per gallon equivalent fuel-alternative.
- Federal tax credits and dealer incentives make electric vehicle purchases attractive.
- Electric vehicles have lower maintenance costs.



### Energy Independence

- Electric fuels are locally generated.
- Domestically produced fuels are not as subject to international influences and/or severe weather events.
- A variable mix of electric generation fuels provides stability in electricity pricing.

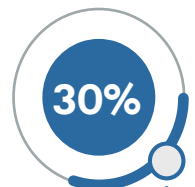


### Beneficial Grid Asset

- Encourage greater integration of renewable generation, help manage peak loads, optimize energy efficiency and enable vehicle-to-grid power supply.

## EV Growth

NC growth in light-duty electric vehicles:  
**50% year over year**



Public charging station growth:  
**30% over the last year**

### Still need more...

- NC has a good charging network, however there are still a lot of gaps!
- The Electric Power Research Institute (EPRI) recommends one public charging station for every four vehicles.

## Value Proposition

### Charging Infrastructure Investment

### Charging Infrastructure is Easy to Install.

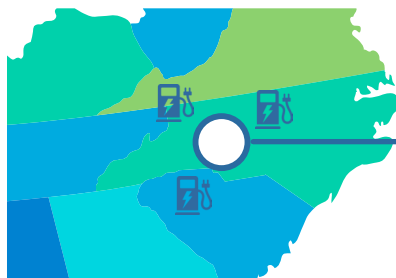
- Electric supply infrastructure is already in place
- No underground storage tank or hazardous material permits, etc.

### This is a Turning-Point Opportunity!

- New technology adoption curve is exponential
- Consumer confidence has compounding effect

## Other Benefits

**TOURISM** destinations can attract more visitors. Electric vehicles can charge while visiting attractions across the state, including rural destination areas.



Visitors from other states will stop in NC to charge while traveling.

NC will be seen as a state that promotes green tourism.



**MEDIUM and HEAVY DUTY** electric vehicles  
*What is available?*



Reduced emissions even with plug-in hybrids!

*There are more emissions reductions per mile for medium and heavy-duty vehicles due to the low per gallon mileage.*

## What is Plug-In NC?

plug-in nc

- State wide collaborative industry group promoting electric vehicle adoption since 2011.
- Long time planning partner with the Department of Energy and North Carolina's Clean Cities Coalitions.
- Promote electric vehicle adoptions through education and outreach, consulting and resource development.
- Provides a collaborative opportunity for stakeholders to work together to ensure a seamless integration of plug-in electric vehicles into our local communities.

Class	Type	Example Manufacturers
Class 4	Hybrid-Electric Ford Transit Van	XL Hybrids
Class 5	Hybrid-Electric Box Truck	HINO
Class 6	All-Electric Refuse Truck	BYD
Class 7	Kalmar All-Electric T2 Yard Tractor	TransPower
Class 8	All-Electric Class 8 Tractor	US Hybrid
Forklifts	All-Electric Lithium Ion BYD Forklift	BYD
Transit Buses	All-Electric Transit Bus (35 or 40 foot)	Proterra
School Buses	All-Electric School Bus	Blue Bird

## How to Connect:

(919) 857-9000

pluginnc@advancedenergy.org

pluginnc.com

plug-in nc

# Plug-In NC Member Organizations

---

- Advanced Energy
- Aerie Bed and Breakfast
- Asheville Outlets
- Bernhardt Furniture Company
- Black Bear Solar Institute
- Blue Ridge Energy
- Blue Ridge EV Club
- Brentwood Solar House
- Brightfield Transportation Solutions
- Brunswick Electric Membership Corporation
- Campbell University
- Canyons of the Blue Ridge
- Centralina Council of Governments
- Centralina Clean Fuels Coalition
- ChargePoint
- Cisco
- City of Asheville
- City of Charlotte
- City of Hendersonville
- City of Winston-Salem
- Correll Associates
- Country Inn & Suites
- Courtyard Raleigh Crabtree
- Double Tree Rocky Mount
- Duke Energy
- Durham County Government
- Earth Shine Nature Programs
- Eastern Carolina Council of Governments
- Economy Inn Greenville
- Elon University
- EVgo
- Front Street Village
- General Electric
- Hanna House
- Hybrid Shop of the Carolinas
- Land of Sky Clean Vehicles Coalition
- Land of Sky Regional Council
- Lord Corporation
- Mayfaire Town Center
- Mills-Rentals
- NC Clean Energy Technology Center
- NC Electric Membership Corporation
- North Carolina State University
- Orange County
- Pecan Tree Inn Bed and Breakfast
- Piedmont EMC
- Piedmont Triad International Airport
- Piedmont Triad Regional Council
- Southern Alliance for Clean Energy
- Stanhope Apartments
- Tanger Outlets Mebane
- The Inn on Pamlico Sound
- The Mayton Inn
- Town of Black Mountain
- Town of Cary
- Town of Chapel Hill
- Town of Edenton
- Town of Montreat
- Town of Morrisville
- Town-Chapel-Hill
- Triangle Clean Cities Coalition
- Triangle J Council of Governments
- UNC Asheville
- UNC Chapel Hill
- UNC Charlotte
- UNC Pembroke
- Western Carolina University
- Wildhorse Adventures

---

## How to Connect:

(919) 857-9000

[pluginnc@advancedenergy.org](mailto:pluginnc@advancedenergy.org)

[pluginnc.com](http://pluginnc.com)

